

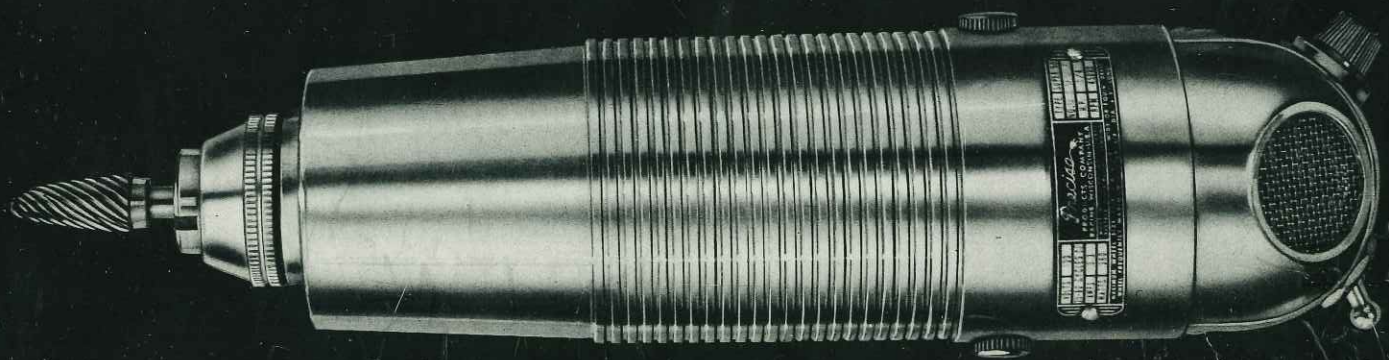
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Precise®

GENERAL CATALOG

GRINDER-MILLERS • POWER QUILLS
MACHINE TOOL MOUNTS • ACCESSORIES



THE *Precise* STORY



ADOLF SCHUMANN



ROBERT SCHUMANN



HELMUT SCHUMANN

THE story of PRECISE begins in 1882 when Adolph Schumann, an instrument maker of Duesseldorf, Germany, went into business for himself and founded Firma A. Schumann to manufacture scientific instruments and precision optical equipment. Expanding into other fields, Firma A. Schumann eventually gained a world-wide reputation for the faithful reproduction of scientific and industrial projects in accurate Scale Models used for Exhibitions, Research and Sales.

To help in the building of Schumann Models the need was felt for a lightweight, speedy and powerful electric tool. In the early 1930's, such a tool operating at the then unheard of speed of 30,000 RPM was first developed by Robert Schumann, son of the founder. An entire series of portable electric tools followed soon to be known throughout Europe by the trade-name "Diros."

Just prior to World War II, Robert Schumann and his son, Helmut—both graduate electrical engineers—were in the United States to open a second plant. Here they redesigned the original tool, making use of the superior American electrical materials to obtain still greater speeds (35,000 RPM) combined with greater power (1/5 HP) and improved accuracy. These tools, contained in black plastic housings, were known as PRECISE-35, and a later model as PRECISE-40. They were by a long margin the fastest and most powerful electric tools for their size on the market then. Due to their smallness, their speed and power, they served the Allied cause well on almost every fighting front of the war. During these crucial years an unlimited new opportunity opened for PRECISE. At the end of World War II tungsten carbide midget mills became available for the first time to users of power tools. The high speed and high power of PRECISE tools was necessary for these new, harder and amazingly fast cutting tools—and still their use in these earlier PRECISE Grinders was a failure. PRECISE tools would not stand up under the greater feed pressures, plastic housings would fatigue and break, bearings would wear out prematurely, chucks would not hold these new tools accurately and securely at high speeds. In short, the plastic housed PRECISE tools which had served so well as hand grinders failed entirely under the new application.

It was for Helmut Schumann to recognize this critical situation and find the solution. After a year of experimentation he completed an entirely new design which it may now be said formed the turning point in the Company's history. The new PRECISE Super 40 was a success. It was the first portable electric tool built to operate both conventional grinding wheels and the new tungsten carbide cutting tools. It had an all aluminum alloy housing precision machined on the outside and micro bored on the inside, four costly super precision, grease sealed

bearings heretofore only used in the most accurate military mechanisms, a new, more rigid quill with a new collet chuck more accurate than those used in expensive lathes, a new motor with more speed and more powerful, and a group of other, fine features. At 45,000 RPM the Super 40 was setting a record for performance and endurance in 1948—a record not equalled by any other portable electric tool—even up to this very day.

Owing to the Super 40's stamina and superior design it was found that in addition to its primary usefulness as a portable Grinder-Miller it could be set up as an auxiliary spindle on standard machine tools such as lathes, mills, surface grinders, etc. To facilitate such set ups the younger Schumann designed a new and valuable accessory—the machine tool mount. A complete line of precision built mounts are today available for every PRECISE model, allowing their quick mounting to conventional machine tools, or making possible special PRECISE set-ups for milling, grinding and finishing parts to the closest of tolerances at very low cost.

The PRECISE Super 40 of 1948 was followed by a newer model carrying the same name and containing refinements further increasing accuracy and improving power output from 1/5 HP to 1/4 HP.

In 1951 another mark was set in the Company's history when Helmut Schumann completed the design of the first "Power Quill"—now widely known as the PRECISE Super 50. This new tool contained in a precision ground and honed alloy steel housing a powerful, high speed motor which was carefully integrated to a quill of the highest precision and rigidity. Cumbersome belts and pulleys so common with conventional lathe grinders became obsolete. The Super 50 was recognized quickly by American industry and today stands as the finest tool in the PRECISE line, exclusively built for mounted applications.

Late in 1953 came the announcement of the PRECISE Super 30—a new record. In a package weighing but 35 oz. PRECISE could offer 45,000 RPM and 1/5 HP in a tool so handy and so accurate as to allow the efficient use of grinding wheels and the new tungsten carbide midget mills. Never before had so much speed, power and precision been designed into so small and handy an electric tool.

Looking ahead, there are new and basic developments in the making. The tradition of the founder, the instrument maker from Germany, who told his sons "grow larger in quality first," is today very much alive as it was some seventy years back. Better designs, higher quality and higher precision at fair cost will continue PRECISE Leadership into the future. Following this road there will be no end to the PRECISE story.

30,000 RPM



May, 1931

35,000 RPM



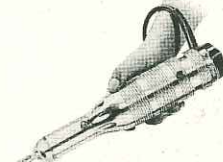
February, 1941

40,000 RPM



May, 1945

45,000 RPM



April, 1948

You can work better and faster with Precise



Precise SUPER 30 GRINDER-MILLER

The SUPER 30 is the ideal tool for handfinishing — LIGHT (only 35 oz.), FAST (45,000 RPM), POWERFUL (1/5 HP!). A precision ground and honed collet chuck will hold Tungsten Carbide Mills firmly and precisely in center, eliminating chatter, vibration and breakage. Mounted points last longer, cut faster and more smoothly. Collet opens and closes by inserting a wrench in rear of tool. No clumsy chuck nuts in front to obstruct view of work. Chuck cap detachable for working in small deep spaces.

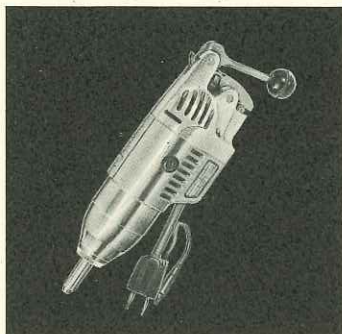
One piece PRECISE quill and motor is supported on two over-sized micro precision ball bearings with lubricant sealed in. Tool housing with hard satin chrome finish has machined surfaces for mounting through PRECISE Machine Tool Mounts, Wheel Arbors for unmounted wheels and Saws with arbor holes of 1/8", 3/16", 1/4" available. Max. wheel size 1" D. x 1/4". Max. cutter size 1/4" D. x 3/4".

The powerful air cooled AC & DC motor is overload protected by a replaceable Fusetron. Motor brushes have automatic brush stops. Neoprene rubber cord is 8 ft. long and with a grounding plug. The SUPER 30 runs absolutely cool and without vibration.

EQUIPMENT INCLUDED:

One Type "S" precision collet, 3/16" size furnished unless 1/8" size specified
One knob wrench with chained lockpin
One spanner wrench used sometimes in place of lockpin
Two spare brushes with brush stops
One spare Fusetron
Operating Instructions — Parts List

Model: Super 30	Volts: 115 AC/DC*
Ship. Wt.: 4 lbs.	Code: ACE
CAT. NO. 1130	



Precise SUPER 30 AUTOMATIC

The Super 30 Automatic speeds up to 45,000 RPM and develops 1/5 HP. This tool is similar to the PRECISE SUPER 30 in basic design and specifications. It comes, however, equipped with a new mechanism which through one single short lever controls a motor switch, a motor brake and the collet mechanism. Moving the control lever upward instantaneously switches off the motor, stops it and opens the precision ground and honed collet chuck. Moving the control lever in the opposite direction will close the collet chuck and remove the motor brake. A small safety switch lever can then be tripped to start the tool.

The SUPER 30 Automatic is used where quick stopping and chuck opening is needed for frequent tool changes or rechucking of small parts up to 3/16" diameter. Tool is built to withstand continuous duty operation within its normal capacity. It can be mounted through standard PRECISE Machine Tool Mounts and will take standard Wheel Arbors. (See pages 6 and 7.)

EQUIPMENT INCLUDED:

One Type "SA" Draw Collet, 3/16" size will be furnished unless 1/8" size specified
Set of wrenches
Two spare brushes with brush stops
One spare Fusetron
Operating Instructions — Parts List

Model: Super 30A	Volts: 115 AC/DC*
Ship. Wt.: 5 lbs.	Code: ABE
CAT. NO. 1130A	



Precise SUPER 40 GRINDER-MILLER

The SUPER 40 is the "workhorse" in our line. It is equally well suited for hand grinding and milling as for mounted applications on standard machine tools. With speeds up to 45,000 RPM and a powerful 1/4 HP output at the precision ground and honed collet chuck the SUPER 40 can take Tungsten Carbide Mills up to 3/8" D. and 1" cutting edge and Grinding Wheels up to 1 1/4" D. and 3/8" width. Tool shanks up to 1/4" can be used. Due to the very rigid and accurate quill, the three oversized, grease sealed micro precision ball bearings, and due to the strong one piece aluminum alloy housing the SUPER 40 will cut, mill, grind and finish faster and smoother than any other portable tool of its size.

The entire tool housing is precision machined on the inside and on the outside. A complete line of PRECISE Machine Tool Mounts is available (see page 7), precision Wheel Arbors to hold unmounted wheels and Saws with 1/8", 3/16", 1/4" arbor holes are also available (page 6).

The powerful air cooled AC & DC motor is overload protected by a replaceable Fusetron. An extra Fusetron is carried in a special compartment. Motor brushes have automatic brush stops. Neoprene rubber cord is 8 ft. long and with a grounding plug. The SUPER 40 runs absolutely cool and without vibration.

EQUIPMENT INCLUDED:

One Type P precision collet, 1/4" size furnished unless 1/8" or 3/16" size specified
One spanner wrench with chained lockpin
Two spare brushes with brush stops
One spare Fusetron in magazine in switch housing
Operating Instructions — Parts List

Model: Super 40	Volts: 115 AC/DC*
Ship. Wt.: 5 lbs.	Code: AFER
CAT. NO. 1140	



Precise SUPER 50 POWER QUILL

The SUPER 50 Power Quill is the finest product in our program. It is a tool for mounted applications. In a precision ground and satin chrome finished steel housing measuring 2 1/2" D. and 9 1/2" overall length it packs 45,000 RPM and a full 1/4 HP at the ground and honed collet chuck. Due to its compactness, its powerful and extremely accurate quill the SUPER 50 will do work heretofore only possible in large single purpose machine tools. Through PRECISE Machine Tool Mounts (see page 7) it is quickly set up on a lathe, milling machine, grinder or other standard machine tool to mill, grind, or finish to tolerances of .0001". Frequently the SUPER 50 is used singly or in multiple installation on production tooling where our customers have produced many an ingenious set-up to do a single or a series of operations on both small and large parts ranging from plastics to glass or from brass to super hard alloy steels.

There are four oversized micro precision ball bearings with lubrication sealed in. These super accurate bearings are carefully preloaded for longer life and chatterfree, smooth running. Wheel Arbors allow use of unmounted grinding wheels or saws with arbor holes of 1/8", 3/16" or 1/4" (page 6). Grinding tools up to 1 1/4" D. and 3/8" width and midjet mills up to 3/8" D. and 1" cutting edge can be used. The ground and honed collet chuck has a maximum capacity of 1/4".

The powerful aircooled AC & DC motor is overload protected by a replaceable Fusetron. An extra Fusetron is carried in a special compartment. Motor brushes have automatic brush stops. Neoprene rubber cord is 8 ft. long and with a grounding plug.

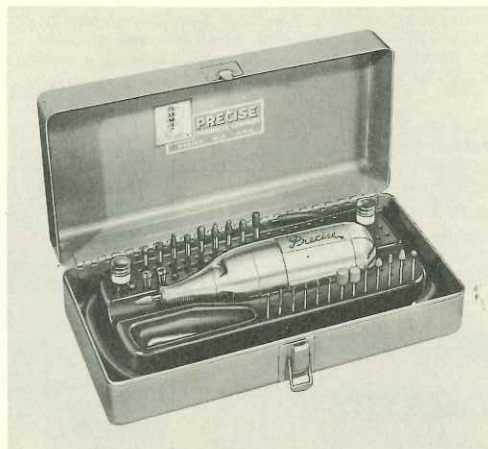
EQUIPMENT INCLUDED:

One Type P precision collet, 1/4" size furnished unless 1/8" or 3/16" size specified
One spanner wrench with chained lockpin
Two spare brushes with brush stops
One spare Fusetron in magazine in switch housing
Operating Instructions — Parts List

Model: Super 50	Volts: 115 AC/DC*
Ship. Wt.: 7 lbs.	Code: AL0D
CAT. NO. 1150	

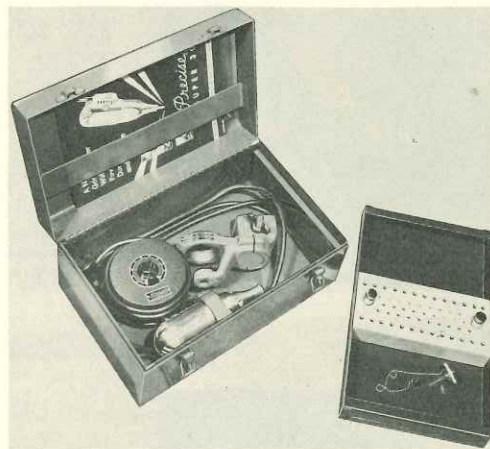
*Standard rotation is counter-clockwise facing chuck. Reverse from standard rotation available at \$12.00 additional cost. Standard voltage 115 volts, DC and AC, 25 to 60 cycles. To operate at 105, 125, 135, 150, 210, 230 and 250 volts AC only, 40 to 60 cycles use PRECISE Voltage Adapter. Add \$10.00 net to price of 115V model. For 440 volt add \$17.00 net.

Precise SUPER 30 IN STEEL TOOL CHESTS



On left is shown the SUPER 30 in its compact steel chest. A hardwood insert provides fitted space for 1/8" and 3/16" shanked tools, collets, wheelarbons and wrenches. (Rotary tools, extra collets, arbors not included.) The cord falls neatly inside the rim of the chest. This is a practical box to keep the SUPER 30 with all needed rotary tools ready for quick use.

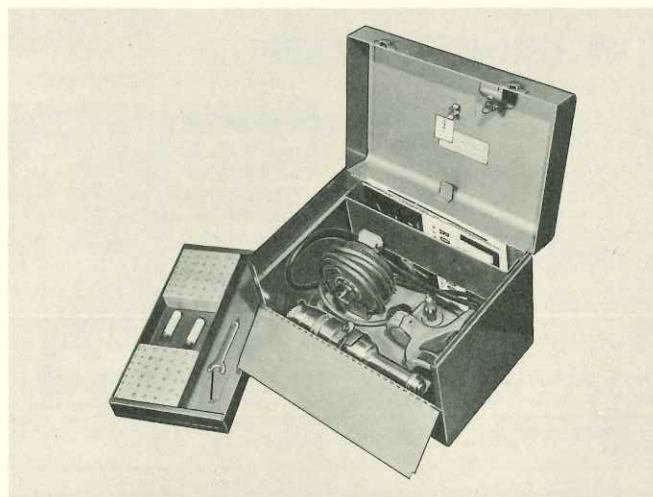
On right is shown the SUPER 30 in large tool chest with double support Universal Mount (Cat. 9230) and Speed Control (Cat. 7200) included. Solid steel tray with hardwood insert provides fitted space for 1/8" and 3/16" shanked tools, collets (1/8" and 3/16" furnished), wheelarbons and wrenches. This package helps keep everything needed together and ready to go to work. (Arbors not incl.)



Model	Volts*	Ship. Wt.	Code	Cat. No.
SUPER 30	115 AC/DC	7 lbs.	ADE	2130
SUPER 30A	115 AC/DC	7 lbs.	AFE	2130A
Chest only	*****	2 lbs.	AFT	2030

Model	Volts*	Ship. Wt.	Code	Cat. No.
SUPER 30	115 AC/DC	21 lbs.	AGE	3130
SUPER 30A	115 AC/DC	21 lbs.	AIM	3130A
Chest only	*****	5 lbs.	ALM	3030

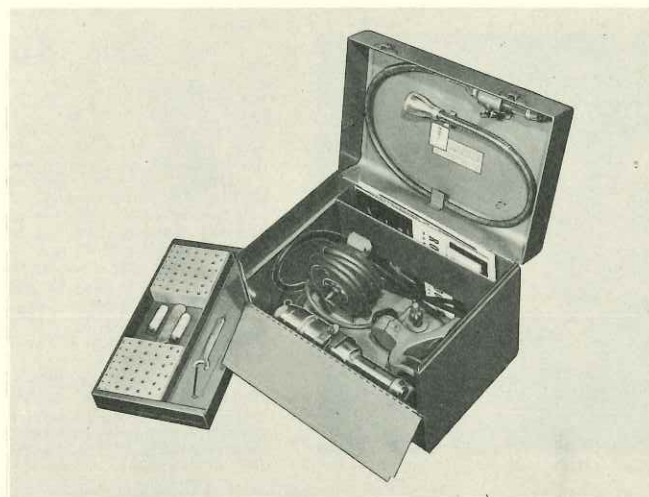
Precise SUPER 40 AND SUPER 50 IN STEEL TOOL CHESTS



The above shows the SUPER 40 in a steel tool chest carefully made from heavy gauge sheet steel. The top is hinged with a piano hinge and provides space to store the Super COOLFLEX Flexible Shaft Attachment. The front section is also hinged to open for easy reach into the box. There is a solid steel tray with hardwood inserts to hold 1/4", 3/16", and 1/8" shanked tools (not furnished, see Rotary Tool Manual) as well as collets (1/8" and 1/4" type P furnished), wrenches and other small accessories. In the lower section there is carefully fitted space to store the SUPER 40 or SUPER 50, the table mounting speed control and the double support universal mount (Super COOLFLEX, Speed Control and Mount not furnished). There also is fitted space for Operational Manuals, Rotary Tool Manual and Catalogues.

This tool box provides the solution to the problem of having the PRECISE and ALL operating accessories together, carefully stored for immediate use. A strong handle and two good hasps, lockable with padlocks, complete the unit. Buy your PRECISE in this package and have room for the accessories you may want later. Having everything in its place ready to work will eliminate looking for things later, saves time, money and temper.

Model	Volts*	Ship. Wt.	Code	Cat. No.
SUPER 40	115 AC/DC	21 lbs.	AGA	2140
SUPER 50	115 AC/DC	21 lbs.	ANA	2150
Chest only	*****	7 lbs.	ALT	2040

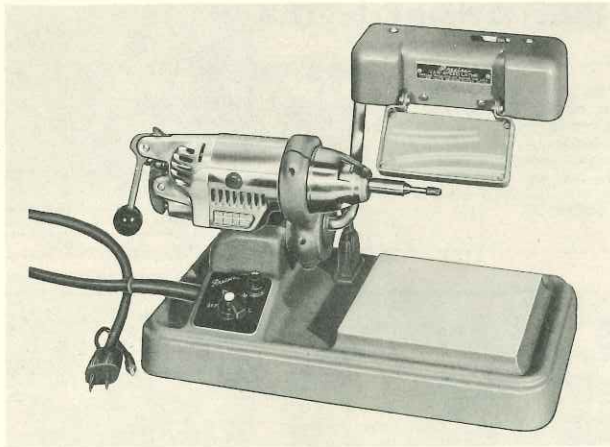


The above shows a complete PRECISE working unit contained in a solid steel tool chest providing fitted space for one PRECISE SUPER 40 or SUPER 50 tool together with important accessories. The Super COOLFLEX Flexible Shaft Attachment is stored in the hinged deep cover. The removable tool tray has a hardwood insert with fitted space for 1/4", 3/16", 1/8" shanked rotary tools (not furnished — see Rotary Tool Manual) and also stores the type P collets in plastic vials (two 1/8" type P collets furnished in addition to the 1/4" type P collet in the chuck of the tool and COOLFLEX hand-piece). There is ample space in the tool tray for wheel arbors (not furnished), wrenches and other items. In the lower section of the chest the SUPER 40 or SUPER 50 is held in a quick releasing, rubber cushioned bracket. A double support Universal Mount (Cat. No. 9240 or 9250) is securely anchored to the base of the chest. The Speed Control (Cat. No. 7200) is held for convenient removal. In the inside back of the chest a steel pocket keeps data such as Instructions, Parts List, Rotary Tool Manual and Catalogues. A strong handle and two good hasps lockable with padlocks complete the unit. This represents our finest and most complete packaged unit. It is an asset in any shop, both small and large, and will pay for itself through its completeness, its universal usefulness covering hand tool uses as well as machine tool mounted set-ups and by eliminating the waste that comes from searching for something when you need it.

Model	Volts*	Ship. Wt.	Code	Cat. No.
SUPER 40	115 AC/DC	30 lbs.	AGIO	3140
SUPER 50	115 AC/DC	30 lbs.	ANI	3150
Chest only	*****	7 lbs.	AMP	2040

*Standard rotation is counter-clockwise facing chuck. Reverse from standard rotation available at \$12.00 additional cost. Standard voltage 115 volts, DC and AC, 25 to 60 cycles. To operate at 105, 125, 135, 150, 210, 230 and 250 volts AC only, 40 to 60 cycles use PRECISE Voltage Adapter. Add \$10.00 net to price of 115V model. For 440 volt add \$17.00 net.

SMALL *Precise* SPEED LATHE

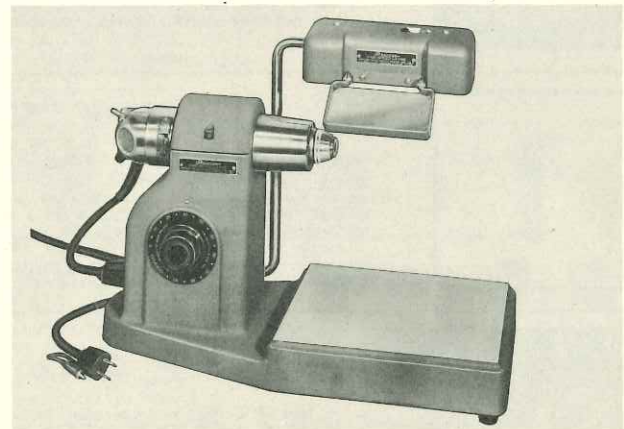


This Speed Lathe offers a convenient method for holding the PRECISE power unit, be it the Model Super 30, 30A, 40 or 50. The tool can be adjusted for height over the machined table from a minimum of 1 1/2" to a maximum of 4 1/2". There is a three speed switch allowing operation at approximately 45,000 RPM, 30,000 RPM and 20,000 RPM free speed. The fully adjustable PRECISE worklight provides uniform, glare-free and cool illumination of the work area. A four-power imported magnifying glass is fastened to the light unit and can also be adjusted separately. On request, at no extra cost, a two-power lense or an adjustable, shatterproof safety glass may be furnished in place of the standard magnifying glass (see Dental Speed Lathe below). The PRECISE Speed Lathe lends itself well to special tooling set-ups where small jigs or fixtures are mounted on the rigid and strongly ribbed lathe bed. Size of machined table 5 5/8" x 5 5/8". Complete size of unit 8" x 13 1/4". Outline drawing showing all principal dimensions available.

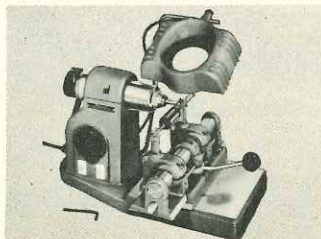
Model	Volts*	Ship. Wt.	Code	Cat. No.
Lathe with SUPER 30	115 AC/DC	50 lbs.	ANK	4130
Lathe with SUPER 30A	115 AC/DC	52 lbs.	APT	4130A
Lathe with SUPER 40	115 AC/DC	53 lbs.	ARB	4140
Lathe with SUPER 50	115 AC/DC	55 lbs.	ARK	4150
Lathe without Tool	115 AC/DC	40 lbs.	ARM	4100

LARGE *Precise* SPEED LATHE

This Speed Lathe was designed to mount either the model SUPER 40 or SUPER 50. It has a fixed height of centerline of tool to base of 6 3/8". A built-in speed control provides continuous adjustment of speeds from 45,000 RPM to 15,000 RPM free speed. The fully adjustable PRECISE worklight provides uniform, glare-free and cool illumination of the work area. A four-power imported magnifying glass is fastened to the light unit and can also be adjusted separately. On request, at no extra cost, a two-power lense or an adjustable, shatterproof safety glass may be furnished in place of the standard magnifying glass (see Dental Speed Lathe below). The PRECISE Speed Lathe lends itself well to special tooling set-ups where small jigs or fixtures are mounted on the rigid and strongly ribbed lathe bed. Size of machined table 8 3/4" x 7 5/8". Complete size of unit 17 1/4" x 8". Outline drawing showing all principal dimensions available.



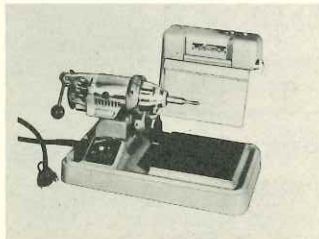
Model	Volts*	Ship. Wt.	Code	Cat. No.
Lathe with SUPER 40	115 AC/DC	55 lbs.	AGIST	4240
Lathe with SUPER 50	115 AC/DC	57 lbs.	AKE	4250
Lathe without Tool	115 AC/DC	42 lbs.	AZE	4200



Precise SLOTTER AND COMMUTATOR CUTTER

This unit allows the efficient undercutting of commutators using Tungsten Carbide Saws which outlast and outperform H.S. steel saws as much as 100 to 1 in the high speed and accurate SUPER 50 POWER QUILL. Precision slide, fully adjustable, will load armatures with and without centers. Unit also suitable for slotting, grinding or milling small parts.

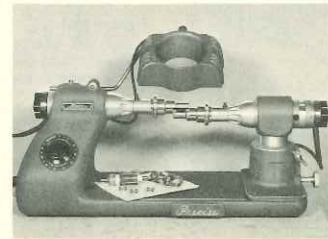
85 lbs. AGORA Cat. No. 4350



Precise DENTAL SPEED LATHE

The Dental Lathe was especially designed for the efficient finishing of stainless alloy castings. It allows the use of Tungsten Carbide midjet mills cutting many times faster than small mounted points, which can also be used. The SUPER 30 Automatic (page 3) supplies the power unit, allowing quick stopping and rechucking for tool changes.

45 lbs. AVE Cat. No. 4530A

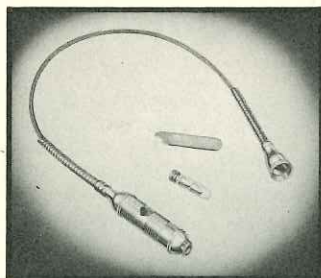


Precise UNIVERSAL WIRE STRIPPER

Due to the high speed of the stripping brushes, stripping pressure is small. This means efficient wire stripping, especially on small magnet wires (26 AWG to 46 AWG) without damage to the copper. Well suited for fine Litz wires, Formex, Nylon, Glass, etc. The PRECISE WIRE STRIPPER is custom built to your needs. Send us wire samples for test and recommendations.

110 lbs. AHA Cat. No. 4440

*Standard rotation is counter-clockwise facing chuck. Reverse from standard rotation available at \$12.00 additional cost. Standard voltage 115 volts, DC and AC, 25 to 60 cycles. To operate at 105, 125, 135, 150, 210, 230 and 250 volts AC only, 40 to 60 cycles use PRECISE Voltage Adapter. Add \$10.00 net to price of 115V model. For 440 volt add \$17.00 net.



SUPER COOLFLEX FLEXIBLE SHAFT EXTENSION 40 50

The SUPER COOLFLEX extends 45,000 RPM and up to 1/4 HP. to a cool-running 10 oz. handpiece. Built for continuous duty. The SUPER COOLFLEX has the same precision collet chuck used on PRECISE SUPER 40 and SUPER 50. Thus collets are interchangeable. The quill is supported in an accurately-machined aluminum alloy housing on two large micro-precision, lubricated and sealed for life ball bearings. New type, fitting high tensile flex core and casing are 36" long. Unit easily attaches to PRECISE SUPER 40 or PRECISE SUPER 50.

EQUIPMENT INCLUDED:

One Type P precision collet 1/4" size and two 1/8" size (one 1/8" size is required to attach unit to PRECISE tool)
One spanner wrench with chained lockpin
One spanner wrench to adjust casing length
Operating Instructions—Parts List

Ship. Wt.	Code	Cat. No.
7 lbs.	180	4400



Precise COLLETS — TYPES "S" AND "SA" 30 30A

Type "S" and "SA" collets are exclusively made to fit Model SUPER 30 and 30A, respectively. These collets are produced from the finest imported collet steel, carefully heat treated, precision ground and honed for extreme accuracy. We are proud of this product and believe that it is unequalled for its quality and precision. Each collet has a range of .005" below rated size, but none above. Its eccentricity is guaranteed within .0005". Special sizes from .0937" to .1875" can be furnished on request.

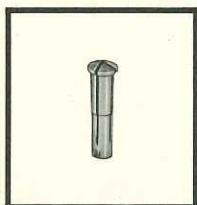
Size	"S"	"SA"
3/32"	5093S	5093SA
1/8"	5125S	5125SA
3/16"	5187S	5187SA
3 mm	5118S	5118SA



Precise TYPE "P" COLLETS 40 50

Type "P" collets are exclusively made to fit Model SUPER 40, SUPER 50 and the SUPER COOLFLEX. They have a parallel viselike grip over their entire length. They are made from the finest grade collet steel, carefully heat treated, precision ground and honed for extreme accuracy. We believe that these collets are unequalled in design, workmanship and performance. They do not exceed .0005" eccentricity. Each collet has a range of .005" below rating, but none above. Special sizes from .0937" to .2500" available on request.

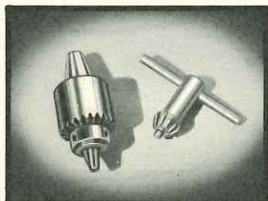
Size	Cat. No.
3/32"	5093P
1/8"	5125P
3/16"	5187P
1/4"	5250P
3 mm	5118P
6 mm	5236P



Precise TYPE "SB" SUB-COLLETS 30 30A 40 50

PRECISE Sub-Collets are new. These small collets should be used when shanks below 3/32" must be chucked. Sub-Collets must be used with 3/16" Type P, S or SA master collets. It is impractical to produce Type P, S or SA collets below a 3/32" size. Thus the Sub-Collets fill a real need. They extend the high degree of precision of the master collet to the small size ranges. They are vastly more accurate than a Drill Chuck, eliminate overhang and unbalance. Sub-Collets are concentric within .0005" and have a range of .005" below rating, but none above. Sizes not listed are available on request.

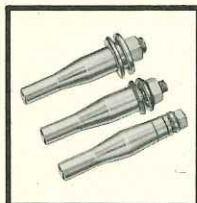
Size	Cat. No.	Size	Cat. No.
3/32"	5935B	3/64"	5465B
5/64"	5785B	1/32"	5315B
1/16"	5625B	1/64"	5155B



Precise DRILL CHUCK 40 50

A special Drill Chuck selected for accuracy is available for use with the SUPER 40 and SUPER 50 or SUPER COOLFLEX. This Chuck is mounted on a hardened and ground double tapered arbor seated in the tapered collet seat of the quill—mounting arbor and wrench furnished. This Drill Chuck may be used for chucking small diameter drills and tools. It has a range from zero to .160". Its concentricity is approximately within .005".

Ship. Wt.	Code	Cat. No.
1 lb.	RAS	14060

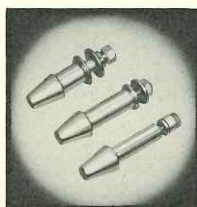


Precise WHEEL ARBORS 30

These Wheel Arbors are made from carefully heat treated alloy steel and precision ground. They mount accurately and securely into the quill of the SUPER 30. These arbors make possible the use of unmounted grinding wheels of 1/8", 3/16" and 1/4" ID and up to 1 1/2" OD and 1/8" width. Also recommended for mounting abrasive cut off wheels, wire brushes and HS steel and tungsten carbide saws. Special sizes available on request. Please give full details on what you require.

Length*	Shaft Dia.	Arbor D	Code	Cat. No.
9/16"	.312"	1/8"	REC	14125S
1/2"	.375"	3/16"	REM	14187S
1/2"	.375"	1/4"	REN	14250S

*Measured beyond end of quill.



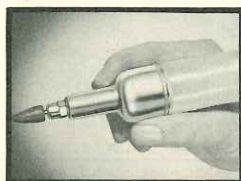
Precise WHEEL ARBORS 40 50

These Wheel Arbors are precision ground from hardened alloy steel and mount accurately and securely into the collet seat of the quill on the PRECISE SUPER 40, the PRECISE SUPER 50 or the SUPER COOLFLEX. These arbors make possible the use of unmounted grinding wheels of 1/8", 3/16" and 1/4" ID and up to 2" OD and 1/2" width. Also recommended for mounting abrasive cut off wheels, wire brushes, HS steel and tungsten carbide saws.

Other arbors to suit your specific needs available. Write us stating your requirements and give details on intended use.

Length*	Shaft Dia.	Arbor D	Code	Cat. No.
1 1/2"	5/16"	1/8"	REP	14125P
1 1/4"	3/8"	3/16"	RES	14187P
1 1/4"	7/16"	1/4"	RETE	14250P

*Measured beyond end of quill.



Precise CHUCK EXTENSION 40 50

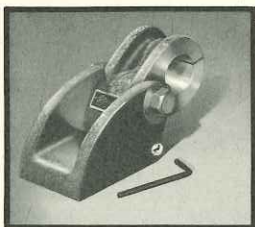
The PRECISE Chuck Extension mounts accurately in the tapered collet seat of the quill of the PRECISE SUPER 40, the PRECISE SUPER 50 or the SUPER COOLFLEX. It extends the chuck by 2-3/16" and reduces its maximum diameter from 7/8" to 7/16". The Chuck Extension is precision ground from hardened alloy steel and equipped with an accurate single purpose 1/8" capacity chuck (chuck wrench included). A slender aluminum alloy protective guard is available for fastening to the quill housing.

NUMBERS INDICATE PRECISE MODELS FOR WHICH ACCESSORY IS DESIGNED.

The Chuck Extension is highly recommended for deep internal grinding with the SUPER 40 or 50 in lathe, or for engraving work, die work, or drop forging dies with the SUPER COOLFLEX.

Part	Length*	Dia.	Code	Cat. No.
Extension	2-3/16"	7/16"	RI	14125X
Guard	1 1/16"	RIA	14125G

*Measured from face of quill chuck to end of chuck extension.



Precise TOOL MOUNT 40 C

Rigidly mounts PRECISE 40, PRECISE Super 40 or the SUPER COOLFLEX for straight-on applications in lathe or other machine tools. Fully and quickly adjustable for height up to 2 1/2". Fastens to lathe with a 1/2" T bolt (bolt not furnished). This mount is especially recommended for smaller lathes (9" size) and for mounting SUPER COOLFLEX handpiece. This mount is made from an aluminum alloy casting, accurately machined and nicely finished in gray crackle.

Ship. Wt.	Code	Cat. No.
5 lbs.	INI	9000



Precise SINGLE SUPPORT UNIVERSAL MOUNT 30 30A

This mount rigidly supports the SUPER 30 or 30A around its accurately machined middle diameter. It is quickly set up with a 5/8" bolt (not furnished). The mount pivots over its solid base and can be readily adjusted for height to a maximum of 4 3/4". Mount is made of high quality, close grained, semi-steel castings, precision machined and finished in machine tool gray. It is recommended where space is limited and especially when tool has to be inserted deep into workpiece where a double support mount with its forward support may be in the way. It attaches easily to a lathe, milling machine or 14" and 15" drillpress having a 1 3/4" diameter drill spindle housing. It frequently is used as a bench mount when SUPER 30 or 30A is mounted stationary and small workpieces are brought up by operator.

Ship. Wt.	Code	Cat. No.
10 lbs.	IKE	9130



Precise SINGLE SUPPORT UNIVERSAL MOUNT 40 50

This mount is designed for easy mounting of SUPER 40 or SUPER 50. It pivots over its solid base to a maximum height of 5". Base may be held by a 5/8" diameter bolt (not furnished). Mount is made of high quality, close grained, semi-steel castings, precision machined and finished in machine tool gray. It solidly supports the PRECISE over a 1 3/4" wide section of the tool's machined or ground middle diameter. This mount is recommended where space is limited and especially when tool has to be inserted deep into workpiece where a double support mount with its forward support may not be used. It sets up quickly on a lathe, milling machine, surface grinder, or a drillpress having a 1 3/4" spindle housing. Often it is used as a bench mount when SUPER 40 or 50 are held stationary and work is brought to the tool.

Ship. Wt.	Code	Cat. No.
12 lbs.	INA	9140



Precise DOUBLE SUPPORT UNIVERSAL MOUNT 30 30A

A very rigid two point suspension distinguishes this mount from the single support Universal Mount described above. The double support mount holds the SUPER 30 at its machined middle diameter as well as in front near the collet chuck. Thus it provides the most rigid mounting we know of—assuring maximum results from the rotary tools in the chuck of the PRECISE. This mount is quickly set up with a 5/8" bolt (not furnished). It pivots over its solid base and can be adjusted to a maximum height of 4 3/4". Mount is made of high quality, close grained, semi-steel castings, precision machined and finished in machine tool gray.

It is our most popular mount for the SUPER 30 and especially recommended for lathe use where it sets up the PRECISE as a small precision internal grinder in less than a minute's time. It also is conveniently mounted on a milling machine, surface grinder, etc., or used with special tooling.

Ship. Wt.	Code	Cat. No.
11 lbs.	ILE	9230

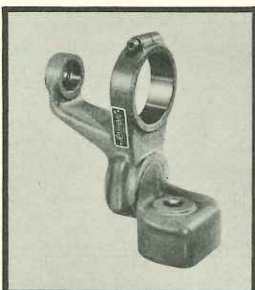


Precise DOUBLE SUPPORT UNIVERSAL MOUNT 40

The two point suspension makes the difference. This double support mount holds the SUPER 40 at its machined middle diameter as well as in front near the collet chuck. Thus it provides the most rigid mounting we know of—assuring maximum results from the rotary tools in the chuck of the PRECISE. This mount is quickly set up with a 5/8" bolt (not furnished). It pivots over its solid base and can be adjusted to a maximum height of 5". Mount is made of high quality, close grained, semi-steel castings, precision machined and finished in machine tool gray.

It is our most popular mount for the SUPER 40. We recommend it especially for lathe use when it converts the PRECISE into a precision direct driven lathe grinder in less than a minute's time. Mounted to a 1 3/4" spindle column of a standard drillpress, or set up in a milling machine it allows the SUPER 40 to become a high speed router, a vertical mill or a high speed drill head:

Ship. Wt.	Code	Cat. No.
12 lbs.	ICON	9240



Precise DOUBLE SUPPORT UNIVERSAL MOUNT 50

Here is a new addition to our Mounts for the SUPER 50. It supports the precision ground, steel housing of the PRECISE in two points, along its middle diameter and in front near the collet chuck. It thus makes the SUPER 50 into the most solid mounted package we know of—assuring the highest precision at the working end. The mount is quickly set up with a 5/8" bolt (not furnished). It pivots over its solid base and can be adjusted to a maximum height of 5 1/8". Mount is made of high quality, close grained, semi-steel castings, precision machined and finished in machine tool gray.

We recommend the double support Universal Mount especially for use with the lathe where it converts the PRECISE Power Quill into a super precision lathe grinder in less than a minute's time. This mount is also very well suited for mounting to a milling machine, surface grinders and other standard machine tools. It should be equally practical on special tooling.

Ship. Wt.	Code	Cat. No.
12 lbs.	IRM	9250

NUMBERS INDICATE PRECISE MODELS FOR WHICH ACCESSORY IS DESIGNED.



Precise COMPOUND UNIVERSAL MOUNT

30

30A

The Compound Universal Mount for the SUPER 30 brings the solid two point suspension of the Universal Mount to a holding fixture which is easily and quickly adjustable in three planes. Two engraved steel dials permit setting of compound angles. Mount is durably and rigidly made of a high quality, close grained, semi-steel casting, precision machined and finished in machine tool gray.

It is especially designed to mount PRECISE tools to larger standard machine tools such as milling machines, tool and cutter grinders, surface grinders, lathes with 9" swing and larger, etc. It is a heavy and solid mount permitting precision grinding as well as milling with Tungsten Carbide tooling.

Ship. Wt.	Code	Cat. No.
22 lbs.	IMP	9330



Precise COMPOUND UNIVERSAL MOUNT

40

This mount is built to handle the SUPER 40. It brings the rigid two point suspension to a mount which is quickly adjustable in three independent planes. Two engraved steel dials permit setting of compound angles. Mount is durably and rigidly made of a high quality, close grained, semi-steel casting, precision machined and finished in machine tool gray.

It is especially designed to mount PRECISE tools to larger standard machine tools such as surface grinders, lathes with 10" swing and larger. This mount is required for thread milling or thread grinding where it adjusts readily for helix angle. It is a heavy and solid mount permitting precision grinding as well as milling with Tungsten Carbide tooling.

There is a special Compound Universal Mount available to use with the well known Bridgeport Milling machines. It has a larger base to match and fastens quickly to the overarm of the Bridgeport. Order by adding "B" after the catalogue number for the standard mount.

Ship. Wt.	Code	Cat. No.
25 lbs.	IMPI	9340
27 lbs.	INEE	9340B



Precise COMPOUND UNIVERSAL MOUNT

50

Here is the most popular mount for the SUPER 50. The same rigid two point suspension of the Universal Mount is built into a fixture which quickly adjusts in three independent planes. Two engraved steel dials permit setting of compound angles. Mount is durable and rigidly made of a high quality, close grained, semi-steel casting, precision machined and finished in machine tool gray.

It is especially designed to mount PRECISE tools to larger standard machine tools such as surface grinders, lathes with 10" swing and larger. This mount is required for thread milling or thread grinding where it adjusts readily for helix angle. It is a heavy and solid mount permitting precision grinding as well as milling with Tungsten Carbide tooling.

There is a special Compound Universal Mount available to use with the well known Bridgeport Milling machines. It has a larger base to match and fastens quickly to the overarm of the Bridgeport. Order by adding "B" after the catalogue number for the standard mount.

Ship. Wt.	Code	Cat. No.
25 lbs.	ION	9350
27 lbs.	INCA	9350B



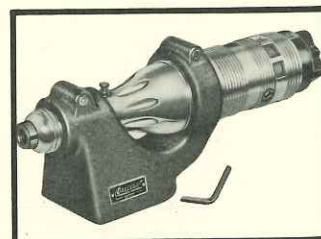
Precise PLANE MOUNT

30

30A

A rigid two point support for the SUPER 30 is offered in the Plane Mount to fasten the PRECISE to flat surfaces for special tooling, be it for production or in the tool room. Mount base is sufficiently heavy to allow threading for bolt mounting or for dovetailing where the PRECISE is to be used in slide tooling. The mount is made from high quality, close grained, semi-steel castings. Mounting surfaces are precision machined — other surfaces are nicely finished in machine tool gray.

Ship. Wt.	Code	Cat. No.
7 lbs.	IRI	9030



Precise PLANE MOUNT

40

Here is a popular and low cost mount offering two point support for the SUPER 40. The Plane Mount fastens the PRECISE to flat surfaces for special tooling, be it for production or in the tool room. Mount base is sufficiently heavy to allow threading for bolt mounting or for dovetailing where the PRECISE is to be used in slide tooling. The mount is made from high quality, close grained, semi-steel castings. Mounting surfaces are precision machined — other surfaces are nicely finished in machine tool gray. (PRECISE not included.)

Ship. Wt.	Code	Cat. No.
9 lbs.	IRA	9040



Precise PLANE MOUNT

50

The Plane Mount is used for rigidly supporting the SUPER 50 near the collet chuck, and around its all steel precision ground housing. This mount fastens the PRECISE to flat surfaces for special tooling, be it for production or in the tool room. Mount base is sufficiently heavy to allow threading for bolt mounting or for dovetailing where the PRECISE is to be used in slide tooling. The mount is made from high quality, close grained, semi-steel castings. Mounting surfaces are precision machined — other surfaces are nicely finished in machine tool gray. (PRECISE not included.)

Ship. Wt.	Code	Cat. No.
9 lbs.	IRIS	9050



Precise OVER-ARM MOUNTING BASE (Round Bar Type)

This mounting base is needed to adapt PRECISE Machine Tool Mounts shown in this catalogue to machine tools having bar type over arms or steel columns. This mount is made of a high quality, close grained, semi-steel casting. It is precision machined and finished in machine tool gray. Mounting bolt with washer and two socket wrenches are furnished. When ordering specify size of bore to which mounting base is to be fitted.

Range of Bore	Ship. Wt.	Code	Cat. No.
2" - 3 1/4"	32 lbs.	IONA	9432
3" - 4 3/8"	40 lbs.	IONE	9443



Precise OVER-ARM MOUNTING (Dovetail Type)

This Over Arm Mounting Base is needed to provide a base for the PRECISE Machine Tool Mounts on machine tools having a dovetail type over arm. It is made from a high quality, close grained, semi-steel casting finished in machine tool gray. All mounting surfaces are precision machined. Mounting bolt with washer and socket wrench furnished. When ordering give dimensions W (width), D (depth) and A (angle).

Max. Width	Ship. Wt.	Code	Cat. No.
5.250"	40 lbs.	INE	9552
6.750"	45 lbs.	ING	9567
8.000"	55 lbs.	INGE	9580

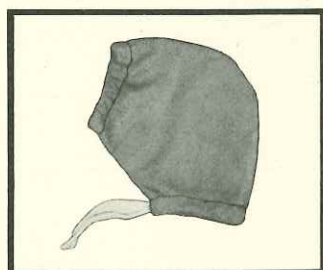


Precise SUSPENSION HANGER

30 40 50

This Hanger is used to suspend SUPER 30, 40 and 50 from above. Especially recommended when SUPER COOLFLEX is used. New design (not shown) has a one piece steel ring.

Ship. Wt.	Code	Cat. No.
1 1/2 lbs.	ICPO	9600

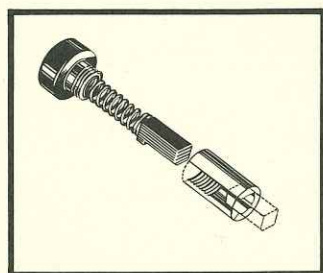


Precise DUST BAG

30 40 50

Here is a simple but effective way to let cooling air come into the tool and keep dust, grit and chips out. The Precise Dust Bag slips quickly over the rear housing of a SUPER 30, 40 or 50. It never clogs. Use a Precise Dust Bag and extend the life of your PRECISE tool.

Part	Ship. Wt.	Code	Cat. No.
Dust Bag	5 oz.	EDE	8400

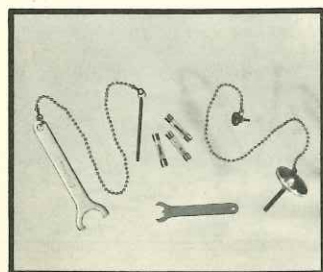


Precise BRUSHES, BRUSH SPRINGS AND BRUSH CAPS

30 30A 40 50

The brush in a universal motor is a very important part. PRECISE Brushes were developed after long years of research. They come equipped with an automatic brush stop which prevents the brush from becoming fully used up and thus allow the brush spring to damage the commutator. Use only PRECISE brushes and brush springs for your protection.

Part	Ship. Wt.	Code	Cat. No.
Brush	2 oz.	ELD	8214
Spring	2 oz.	ELF	8215
Cap	2 oz.	ELK	8216

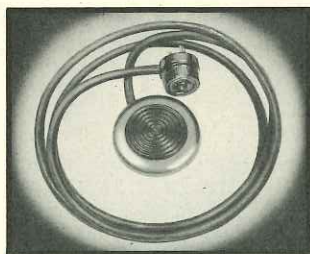


Precise FUSETRON AND WRENCHES

The FUSETRON is a small but very important part of every PRECISE tool. It protects your motor from costly damage and thus extends its life many times. The PRECISE Fusetron was especially designed for the PRECISE motor. NEVER use ordinary fuses or slugs since your motor protection will be lost. Have some spare PRECISE Fusetrons on hand.

Part	Ship. Wt.	Code	Cat. No.
Fusetron*	2 oz.	EASE	8144
S30 Wrench	6 oz.	EAST	83422
S30 Quill Lock	4 oz.	EAT	83451
S40 & S50 Wrench	6 oz.	EAR	8446

*For Super 30, 30A, 40, 50.

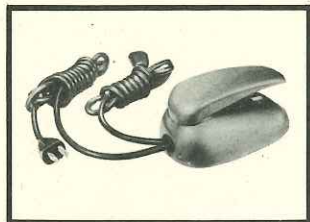


Precise FOOT SWITCH 30 40 50

Has a rated capacity of 10 amperes and responds to very slight foot pressure. Contact is made only as long as foot remains on switch. Six foot rubber cord and series plug included. Ideal for production use, especially with SUPER COOLFLEX. Comes with a new non-slip rubber pad (not shown).

Ship. Wt.	Code	Cat. No.
2 lbs.	BEN	7000

Operates on AC & DC, 25 to 60 cycles.



Precise FOOT SPEED CONTROL 30 30A 40 50

This control allows speed regulation by foot within a range from approximately 15,000 RPM to 45,000 RPM in seven steps. The control is equipped with an adjustable stop to limit the speed range as needed. Suitable for medium heavy duty. Comes with 10 foot rubber cord and series plug.

Ship. Wt.	Code	Cat. No.
3 lbs.	BAAL	7100

Operates on AC & DC, 25 to 60 cycles.

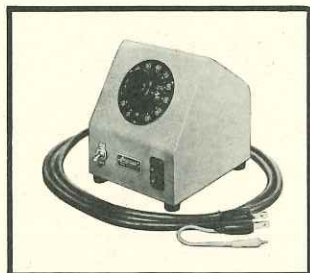


Precise TABLE MOUNTING SPEED CONTROL 30 40 50

This is the most popular speed control in our line. Allows CONTINUOUS adjustment of speed by means of a handy control knob over a calibrated dial. Range approximately 15,000 to 45,000 RPM. Being a rheostat type control there is a power loss and a speed drop under load more noticeable at very low speed settings. The unit comes with six foot cord and series plug. Built for heavy, continuous duty.

Ship. Wt.	Code	Cat. No.
4 lbs.	BAAT	7200

Operates on AC & DC, 25 to 60 cycles.



Precise VARI SPEED CONTROL (Small) 30 30A 40 50

Our newest and best speed control. It operates on the principle of voltage control. Since it maintains a constant voltage at each setting of the dial, it noticeably reduces speed drop under load and tends to hold speeds more constant. It is recommended for production applications and where PRECISE is mounted to do very accurate work and where speeds must be closely controlled. The large calibrated control knob allows CONTINUOUS adjustment from 100 to 45,000 RPM. Since there is a power loss in electric motors corresponding to the drop in speed

it is not practical to operate at very low speeds. We find that a useful working range exists between 10,000 and 45,000 RPM. In this range the Vari Speed Control affords excellent regulation. Built for continuous, heavy duty. It is equipped with six foot Neoprene cord with grounding plug and receptacle in the base to plug in the PRECISE to be controlled.

Ship. Wt.	Code	Cat. No.
7 lbs.	BAM	7303

Operates on AC, 50 to 60 cycles only.

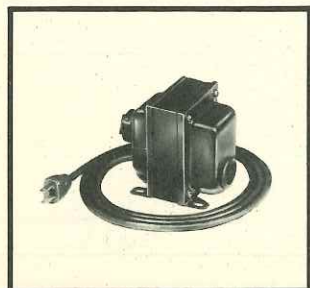


Precise VARI SPEED CONTROL (Large) 30 40 40 50

This unit is a voltage type control and has the same good regulating characteristics described above under the Small Vari Speed Control. It is a much larger unit, however, and thus allows the simultaneous speed control of several PRECISE by merely setting one handy control knob. It comes equipped with a Voltmeter, permitting accurate settings which can be easily repeated. Six foot Neoprene cord with grounding plug and multiple receptacles on base of unit included.

Size	Ship. Wt.	Code	Cat. No.
2 Tools	10 lbs.	BALE	7305
3 Tools	15 lbs.	BALSA	7310
5 Tools	20 lbs.	BALTIC	7315

Operates on AC, 50 to 60 cycles only.

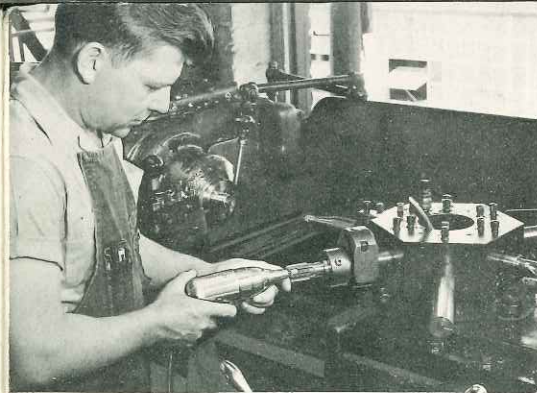


Precise VOLTAGE ADAPTERS 30 30A 40 50

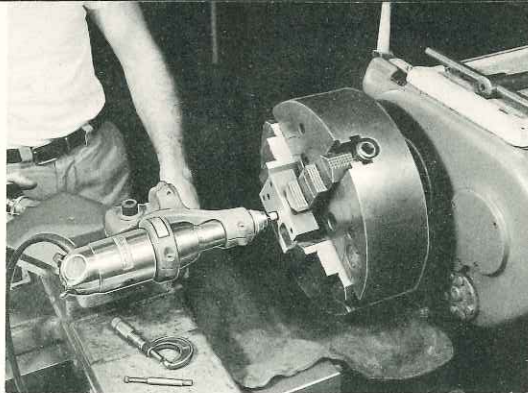
These units allow the operation of standard 115 volt PRECISE tools on 105, 125, 135, 150, 210, 230, 250 and 440 volts, AC, 40 to 60 cycles. There is a six foot rubber cord included. Receptacle on base to plug in PRECISE. When ordering specify for what voltage adapter should be set.

Range	Ship. Wt.	Code	Cat. No.
105 - 250 Volts	15 lbs.	BEI	7300
440 Volts	15 lbs.	BIS	7400

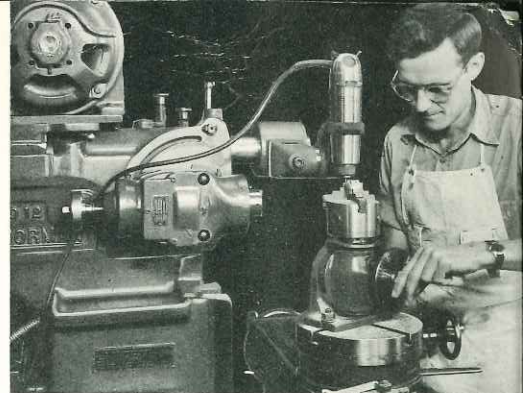
Operates on AC, 40 to 60 cycles only.



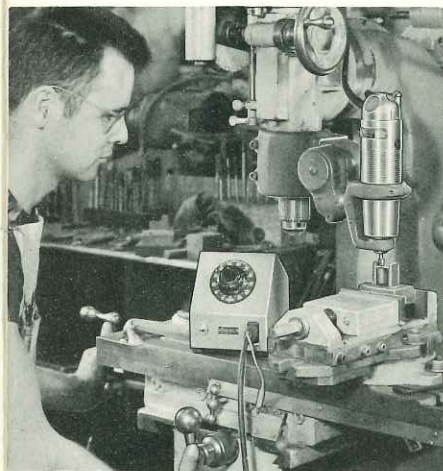
Regrinding Tap in turret lathe with SUPER 30 using PRECISE Flex Wheel at high RPM. Result: High surface finish, longer time between regrinds.



Grinding Die in lathe using SUPER 40 in double support Universal Mount. Note ease with which mount adjusts in lathe and rigid support given tool.



Milling aluminum part in dividing head with T.C. End Mill. The SUPER 50 is rigidly held in Compound Universal Mount and Overarm Mount.



Correcting hardened die with PRECISE T.C. Midget Mill. SUPER 50 is mounted to Index Mill.



Blending radius in hardened forming die using SUPER 40 and SUPER COOL-FLEX with Tungsten Carbide Mill.

Highspeed. — Power and Precision. — Why?

In the last 25 years PRECISE has pioneered very high RPM, electric tools — why? The answer is simple. With more spindle speed, more metal is removed. "Time is Money" and high speed spindles save time. Using small grinding wheels and tungsten carbide mills you need **all the Speed** you can buy. You also need **Power** to maintain this high spindle speed. Precision in spindle and tool will do other things for you. It will produce superb surface finishes on your work and extend the life of cutting tools many times. Precision also extends the life of your power tool.

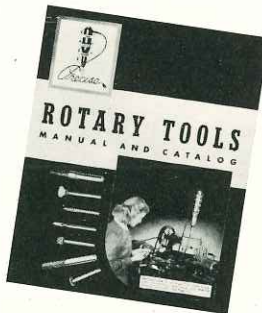
High speed, power and precision pay you well! The three are not easily had together. It surely takes "know how" gained over the years as well as time and costly materials to build such tools. Therefore check which tool you buy. Don't buy on price alone. The first cost is not your actual cost.

There are 18 selected photos with interesting applications. Look them over and judge for yourself what PRECISE can do in your plant.

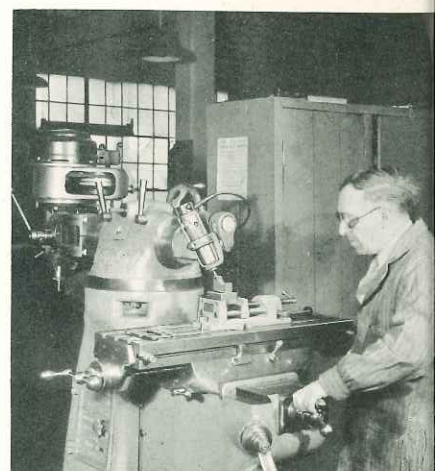


Write

The NEW Rotary Tool Manual will show you the most efficient tools to use with your PRECISE. In over 40 pages it covers a large choice of tools made from HS Steel, Tantalum, Tungsten Carbide, Abrasives and Diamonds. It also has a section entitled "Tool Clinic" discussing Techniques, Tool Failures and New Methods. You should have a copy! It's free!



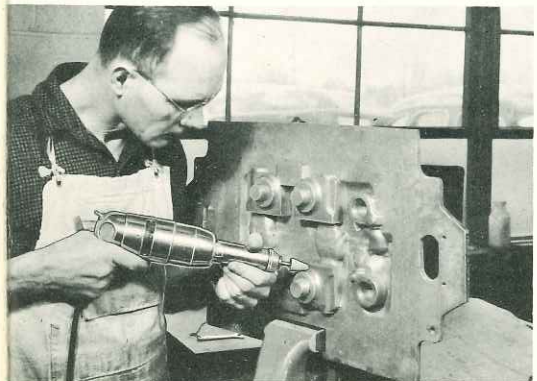
PRECISE PRODUCTS CORPORATION, RAGINE, 1, WIS.



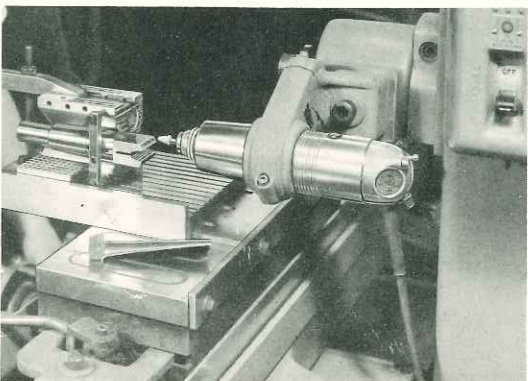
Milling hardened steel part in Bridgeport Mill with SUPER 50 (older Model) held in Compound Universal Mount.



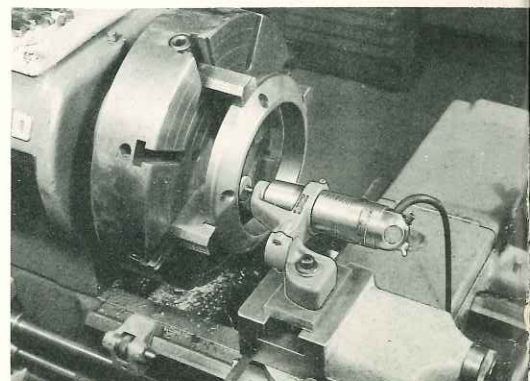
Routing Masonite model with PRECISE T.C. Mill. SUPER 30 mounted on 14" Delta Drill Press.



Polishing Aluminum Pressure Plate with PRECISE Flex-Wheel run in SUPER 40. Note very good finish obtained through high RPM of tool.



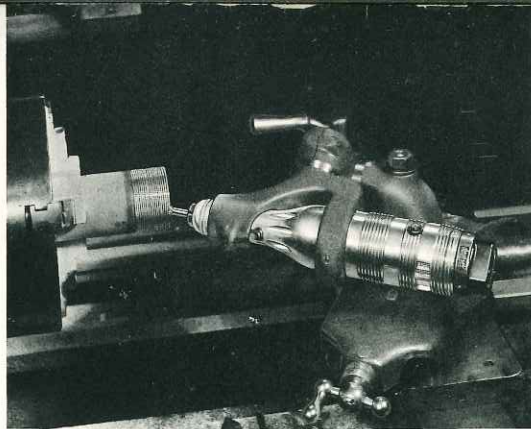
Finish Grinding collets for Turbo Jet engine blades. Tolerance $\pm .0001$ ". SUPER 50 is mounted on Surface Grinder.



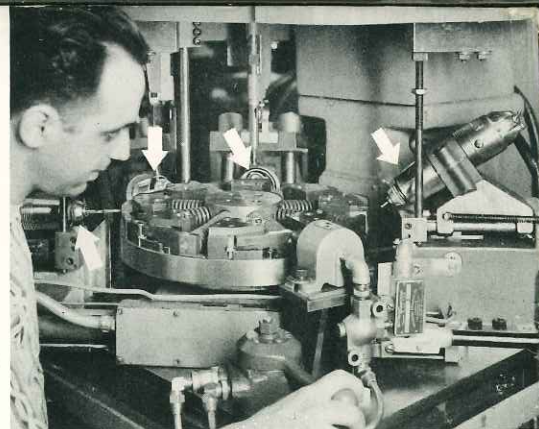
Internal Grinding large hardened steel collar. The SUPER 50 is rigidly held — note grinding wheel in PRECISE Wheel Arbor.



Milling hardened forming die with T.C. Mill in SUPER 40. Correction is made in fraction of time formerly required when grinding.



Thread milling Fiberglass tubing obtaining smooth surface finish with SUPER 40 (older Model). Mount adjusted for helix angle.



Production Set-up with four SUPER 50 Power Quills drilling, chamfering and milling small brass part.



Drilling small holes with SUPER 50 (older Model) attached to regular 14" Delta Drill Press.



Handfinishing forming die with SUPER 30. Note smallness of tool and ease with which it is handled.

OUR POLICY

PROGRESS—through better tool design, higher performance, greater precision—at reasonable cost. This is our policy. Therefore we must reserve the right to change designs, specifications and sometimes prices—without giving previous notice.

TERMS

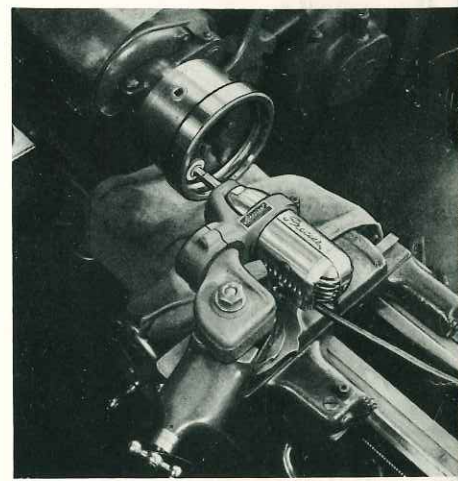
Prices shown on our price lists are NET and F.O.B. our Racine Plant. Minimum order \$2.00. Materials returned with our consent for credit is subject to a 10% handling charge unless return is caused through an error on our part.

HOW TO ORDER

Specify items to be ordered by giving quantity, name and catalogue number. When ordering by wire or cable use code name.

ABOUT PATENTS AND DRAWINGS

The Trade Mark "PRECISE" is registered with the U. S. Patent Office. PRECISE designs are protected by seven active U. S. letters of patent. New patents are under application in the U. S. and abroad. Outline drawings giving detailed dimensions on principal items in this catalogue are available at no charge.



Internal grinding hardened steel ring with SUPER 30 mounted in lathe using rigid PRECISE Wheel Arbor.



Micro Milling hardened steel die. The SUPER 50 removes as much as .005" in one pass, leaving surface finishes under 10 micro inches and producing a straight and round hole.



Finish grinding forming die with SUPER 50 (older Model) mounted through Universal Mount and Overarm Mount.

Precise

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PRODUCTS CORPORATION
RACINE 1, WISCONSIN, U. S. A.

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